Amendments to the Claims:

This listing of Claims will replace all prior versions, and listings, of Claims in the application.

Listing of Claims:

1. (Currently Amended)   A gamut conversion system comprising:

input channel means for receiving source image data;

a gamma unit ~~for converting~~ configured to convert said source image data into perceptually uniform space data;

a chroma/luma unit ~~for converting~~ configured to convert said perceptually uniform space data into a format comprising chroma and luma components of said source image data;

a hue angle calculator ~~for receiving~~ configured to receive at least the chroma components of said source image data from the chroma/luma unit and ~~for calculating~~ configured to calculate hue angles for said source image data based on ~~received~~ said chroma components; and

a gamut conversion unit ~~for deriving~~ configured to use said hue angles to derive gamut conversion values to apply to the chroma components of said source image data ~~using the hue angles~~ to produce image data values specified in an output gamut; said gamut conversion unit further comprising a means for adjusting out-of-gamut colors back into the output gamut.

2.   (Currently Amended) The gamut conversion system of Claim 1 wherein ~~the chroma/luna unit may bypass~~ said source image data may bypass said chroma/luma unit, if said source image data is already in a format comprising chroma and luma components.

3.   (Original) The gamut conversion system of Claim 1 wherein said hue angle calculator calculates hue angles in degrees from zero to some power of two.

4. (Previously Presented)   The gamut conversion system of Claim 1 wherein said gamut conversion unit comprises a look-up table having pre-computed and stored gamut conversion values.

5. (Previously Presented)   The gamut conversion system of Claim 1 wherein the gamut conversion values are determined by traversing the edges of a plurality of gamuts to which said system is to apply conversion.

6. (Previously Presented)   The gamut conversion system of Claim 5 wherein said plurality of gamuts to which said system is to apply conversion comprises a plurality of a group, said group comprising: input gamuts, monitor gamuts and multi-primary gamuts.

7. (Previously Presented)   The gamut conversion system of Claim 1 wherein said gamut conversion unit derives said gamut conversion values by traversing the edge of a gamut polygon to generate a saturation value at each hue angle.

8. (Previously Presented)   The gamut conversion system of Claim 7 wherein said gamut conversion unit generates one color in a perceptually uniform chroma/luma space for each hue angle.

9. (Original)   The gamut conversion system of Claim 8 wherein said gamut conversion unit arbitrarily chooses saturation and chroma values for each hue angle, converts the color to CIE chromaticity, corrects the resulting color to substantially lie on the edge of the gamut polygon, and converts the color to chroma/luma.

10. (Original)   The gamut conversion system of Claim 7 wherein said gamut conversion values are generated along the edges of the gamut and, for a set of points along said edge, chroma/luma and hue angle data is generated.

11. (Original)   The gamut conversion system of Claim 10 wherein for each hue angle, a plurality of chroma/luma data is generated.

12. (Previously Presented)   The gamut conversion system of Claim 7 wherein ratios of saturation values are computed to convert one gamut space to another gamut space.

Claims 13. – 35: (canceled).